

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1, 3-12, and 15-22 are pending in this application. Claims 20-22 are herein added for examination. Applicants submit no new matter is added.

Claims 5, 11, 12, and 19 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 4, 5, 8, 9, and 11 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent application publication 2005/0116547 to Lin et al. (herein "Lin") in view of U.S. patent 5,115,386 to Shirahama et al. (herein "Shirahama"). Claims 3, 7, and 12 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lin in view of Shirahama and U.S. patent application publication 2004/0066094 to Suzuki et al. (herein "Suzuki"). Claims 15 and 17 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lin in view of Shirahama and U.S. patent application publication 2006/0202636 to Schneider. Claims 18 and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lin in view of Shirahama and Suzuki. Claims 6, 10, and 16 were objected to as dependent upon a rejected base claim, but were noted as allowable if rewritten in independent form to include all of the limitations of their base claim and any intervening claims.

Initially, applicants gratefully acknowledge the indication of the allowable subject matter in claims 6, 10, and 16. With respect to that indication of allowable subject matter the present response adds new claims 20-22 for examination that are believed to recite that allowable subject matter. More specifically, new independent claim 20 corresponds to previously pending dependent claim 6 rewritten in independent form. Further, new independent claim 21 corresponds to previously pending dependent claim 10 rewritten in independent form, and new dependent claim 22 depends on new independent claim 21. Thereby, applicants respectfully submit each of new claims 20-22 recite subject matter indicated as allowable in the Office Action and that thereby those claims are allowable.

Addressing now the rejection of claims 5, 11, 12, and 19 under 35 U.S.C. § 112, second paragraph, that rejection is traversed.

Claims 5 and 19 were still rejected based on the phrase “pseudo-sinusoidal voltage wave” not being clear. Initially with respect to that grounds for the rejection, applicants note each of claims 5 and 19 is amended to make a clarification that the pseudo-sinusoidal voltage wave form includes “a standard square waveform”. That subject matter is believed to be clear from the original disclosure, see for example Figures 2(a) and 2(b). Applicants further submit the specification clearly sets forth the meaning of the term “pseudo-sinusoidal”, as now further discussed.

One basis for maintaining the rejection that the phrase “pseudo-sinusoidal voltage wave” is unclear is that the specification only provides examples of how a pseudo-sinusoidal voltage wave is generated, which is argued as insufficient support for defining and use of the term in the claims.¹

First, applicants submit the specification clearly indicates what a pseudo-sinusoidal voltage is to one of ordinary skill in the art. The specification sets forth, for example in Figures 2(a) and 2(b), how a pseudo-sinusoidal wave is generated and shows examples of wave forms such as in Figure 2(b) that can be utilized in generating the pseudo-sinusoidal voltage wave, which provides a clear indication to one of ordinary skill in the art for that term.

Applicants also note a further example in Figure 10 in the present specification shows a *specific example of a pseudo-sinusoidal wave*, as noted in paragraph [0024] in the specification.

Applicants also note submitted with the previous response was a publication to Chun et al. clearly setting forth how one of ordinary skill in the art would understand the term

¹ Office Action of October 29, 2009, middle of page 3.

“pseudo-sinusoidal”, and that publication has not even been addressed. That is, the Office Action has not even addressed why in view of such a publication itself using the term “pseudo-sinusoidal” signal the Office Action continues to take the position that one of ordinary skill in the art would not understand that term. Thereby, reciting the “pseudo-sinusoidal” in claims 5 and 19 is believed to be proper.

Each of claims 5 and 19 is herein amended to clarify the phrases therein noted as unclear by now reciting “a decrease in a system voltage”.

Claim 11 is herein amended to clarify the language noted as unclear.

Claim 12 is amended to clarify certain terminology therein, and to depend from claim 3, to clarify the antecedent basis for the features recited therein.

In view of the presently submitted claim amendments and foregoing comments, applicants respectfully submit the claims as currently written are proper under 35 U.S.C. § 112, second paragraph.

Addressing now the above-noted prior art rejections, the claims as written traverse those rejections.

Each of the prior art rejections relies on Lin in view of Shirahama as the primary references. For example, with respect to independent claim 1, the outstanding rejection relies on Lin to disclose a straightforward switch 43, a first inverter or rectifier 11, 12, a second inverter or rectifier 12, 22, and a battery 30. The Office Action also notes in the event of a failure of inverters or rectifiers 21 and 12, the remaining inverters or rectifiers 11 and 22 will be connected in series with each other when the straightforward switch 43 is open, and thereby supply the respective electric powers to the load.²

Applicants note independent claim 1 is amended to incorporate similar features as previously recited in dependent claim 3, and now further recites “wherein at least one of the

² Office Action of October 29, 2009, middle of page 6.

first or second single phase inverters or rectifiers is connected to the battery through a DC-DC converter". Independent claim 18 also already recites a "DC-DC converter". Applicants submit such features are clearly neither taught nor suggested by the applied art.

In the primary cited reference to Lin a load (not shown) is supplied a current from an INPUT AC VOLTAGE through a parallel circuit including a by-pass switch 43 and two current conversion units 10, 20, and the current conversion units 10, 20 are formed by a series and cross-connection of rectifiers 11, 21 and inverters 12, 22.

The objective of the device of Lin is that when either one of the rectifiers 11, 21 and/or the inverters 12, 22 fails as a result of a malfunction, the power system still operates normally and outputs the current to the load through the other one of the rectifiers 11, 21 and/or the inverters 12, 22.

In contrast to such an operation in Lin, in the claimed invention as currently written, an uninterrupted power supply can be obtained, and which is capable of compensating for a variation in a system voltage in a normal condition, and which can further supply a predetermined voltage to a load even after the system voltage has dropped to less than the predetermined value and a straightforward switch has been cut off, by combining two kinds of single phase inverters.

Applicants submit Lin does not disclose or suggest the features of the claimed connection to the DC-DC converter and further Lin could not be modified to include such a structure.

Further, applicants note Suzuki, which was cited to disclose a DC-DC converter for example in Figure 5,³ merely discloses a DC-DC converter connected to a transformer 2. Such disclosures in Suzuki are not even relevant to the claimed features in which at least one of a first or second single phase inverter or rectifier is connected to a battery through a DC-

³ Office Action of October 29, 2009, page 9, last paragraph.

DC converter. That is, in the claimed invention a battery is provided between the first or second single phase inverter or rectifier and the DC-DC converter. The disclosure in Suzuki does not disclose that structure and would not be applicable to such a structure.

Thereby, applicants submit no disclosure in Suzuki can cure the deficiencies in Lin with respect to the claims as currently written.

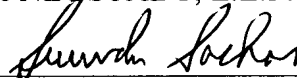
Moreover, no other art was cited with respect to the above-noted features and no other cited art is believed to cure the above-noted deficiencies in Lin.

In view of the present response applicants respectfully submit each of the claims as currently written positively recites features neither taught nor suggested by the applied art, and thus the claims as written are allowable over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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